

REMARKS

Restriction

The Examiner indicates that there are seven groups of patentably distinct inventions defined by the claims in this application, as follows:

Group I, which includes Claims 1-15, is indicated as being drawn to a device for detecting charged particles, classified in Class 204, subclass 603;

Group II, which includes Claims 20-46, 47-50, 75-102, and 103-106, is indicated as being drawn to a device for separation or mixing of particles, classified in Class 204, subclass 672;

Group III, which includes Claims 132-133, is indicated as being drawn to a device for sedimenting and electrophoresing particles, classified in Class 204, subclass 610;

Group IV, which includes Claims 16-19, is indicated as being drawn to a method of detecting charged particles, classified in Class 204, subclass 452;

Group V, which includes Claims 51-65, 68-69, and 107-125, is indicated as being drawn to a method of separating particles, classified in Class 204, subclass 556;

Group VI, which includes Claims 66-67 and 126-127, is indicated as being drawn to a method of complex formation, classified in Class 204, subclass 451; and

Group VII, which includes Claims 70-74 and 128-131, is indicated as being drawn to a method of damaging cells, classified in Class 435, subclass 173.7.

The Examiner also indicates that there are method claims directed to the following patentably distinct species: electrophoretic mobility and isoelectric point and that a disclosed species must be elected.

Election:

In response to this Restriction, applicants hereby affirmatively elect the claims of Group I (i.e., Claims 1-15), *with traverse*, as discussed in detail below.

Applicants hereby affirmatively elect the species that is directed to the isoelectric point. The following claims are readable upon the elected species of isoelectric point:

- Claims 1-10, 13-15 (in Group I that was elected);
- Claims 16-19 (in non-elected Group IV);
- Claims 47-50, 75-102, and 103-106 (in non-elected Group II);
- Claims 68-69, and 107-125 (in non-elected Group V);

- Claims 70, 73-74, 128, and 130-131 (in non-elected Group VII);
- Claims 126-127 (in non-elected Group VI); and
- Claims 132-133 (in non-elected Group III).

Traverse of the Restriction of Groups I-VII under Item 2. of the Office Action:

Applicants respectfully traverse the restriction requirement and submit that Groups I and IV should be examined together and that Groups II and V should be examined together for the reasons given below.

The Examiner has indicated that Groups I-III and Groups IV-VII are related as product and process of use and that the inventions defined therein can be shown to be distinct under MPEP § 806.05(h), since the device as claimed can, for example, be used to study the relaxation time of uncharged polar molecules in response to turning on and off the electric field or switching the polarity of the electric field. Therefore, she asserts that the device can be used in a *materially different process*.

Discussion of Inventions of Groups I and IV

Applicants respectfully disagree that Inventions I and IV are distinct. Since Invention I is an apparatus claim directed to “A device for detecting charged particles in a fluid...,” and Invention IV is a process claim directed to “A method for detecting charged particles in a fluid,” it seems that the determination of distinctness is more appropriately made under MPEP § 806.05(e) Process and Apparatus for Its Practice, instead of MPEP § 806.05(h) Product and Process of Using. MPEP § 806.05(e) states that the process and apparatus for its practice can be shown to be distinct inventions, if either or both of the following can be shown: (A) that the process as claimed can be practiced by another materially different apparatus or by hand; or, (B) that the apparatus as claimed can be used to practice another materially different process.

Under MPEP § 806.05(h), the Examiner has asserted that the device can be used to study the relaxation time of uncharged polar molecules in response to turning on and off the electric field or switching the polarity of the electric field. Although that test is set forth under MPEP § 806.05(h), it appears that the Examiner's reason reads on MPEP § 806.05(e)(B) instead of MPEP § 806.05(e)(A). So the issue should be whether it can be shown that the apparatus (i.e., the apparatus of Claims 1-15)

1 can be used to practice another materially different process (e.g., the study of the relaxation time of
2 uncharged polar molecules).

3 The Examiner should note that subparagraph (c) of Claim 1 recites “means for detecting the
4 position of said **charged** particles within said microchannel after application of said voltage.” In
5 contrast, the Examiner has set forth an example of a materially different method that uses the
6 apparatus of Claim 1, which is based on the study of **uncharged** polar molecules. Since Claim 1 does
7 not recite a means for detecting or studying particles that are *uncharged*, and because
8 subparagraph (c) recites a “means plus function clause,” it should be apparent that detecting the
9 position of **charged** particles is an inherent part of the apparatus **as claimed**. Accordingly, applicants
10 respectfully submit that the apparatus **as claimed** cannot be used to practice another materially
11 different process, wherein the materially different process requires that *uncharged* particles be used.
12 Thus, applicants respectfully submit that the Examiner has failed to show that the inventions of
13 Groups I and IV are patentably distinct from one another.

14 Discussion of the Inventions of Groups II and V

15 Applicants also respectfully disagree that Groups II and V are distinct. Again, applicants note
16 that a determination of distinctness between these two Groups is more appropriately made under
17 MPEP § 806.05(e) Process and Apparatus for Its Practice, instead of MPEP § 806.05(h) Product and
18 Process of Using. To support her assertion that the claims in these two Groups are patentably
19 distinct, the Examiner must show that the apparatus (i.e., as recited by Claims 20-46, or Claims 47-
20 50, or Claims 75-102, or Claims 103-106) can be used to practice another materially different
21 process. Again, the Examiner has asserted that one such materially different process is the study of
22 the relaxation time of uncharged polar molecules.

23 Independent Claim 20 recites a device comprising a microchannel, a pair of electrodes, a first
24 outlet, and at least a second outlet. Independent Claim 47 of Group II recites a device comprising a
25 microchannel, a second inlet, a pair of electrodes, and an outlet. Claim 75 of Group II recites a
26 device comprising a microchannel, a pair of electrodes, and an outlet. Claim 103 of Group II recites
27 a device comprising a microchannel, a second inlet, a pair of electrodes, and an outlet. However, it
28 does not appear that there is a component present in any of the independent apparatus claims that
29 might be used for measuring or detecting parameters necessary to study relaxation time of a charged
30 particle. Thus, it does not appear that this particular apparatus can be used for the process set forth by

1 the Examiner as an example of an alternative method. Applicants submit that the Examiner has
2 therefore failed to show that the inventions recited by the claims in Groups II and V are patentably
3 distinct from one another.

4 Generic Claims

5 The Examiner has indicated that method Claims 16-19 and 68-70 are currently generic.
6 Applicants also note that Independent Claims 1 and 47 are also generic. Claim 1 is directed toward a
7 device for detecting charged particles as recited in the preamble, and more specifically, recites means
8 for detecting the position of charged particles in subparagraph (c). Independent Claim 1 does not
9 include any recitation with respect to the particles' electrophoretic mobility or an isoelectric point, but
10 either of these properties of a particle may apply, and Claim 1 is thus generic to both species.

11 Independent Claim 47 is directed to a device for mixing particles contained in a first fluid into
12 a second fluid. With respect to subparagraphs (a) through (d), there is reference to "particles" but no
13 recitation regarding a particle's electrophoretic mobility or isoelectric point. Thus, both of these
14 species are encompassed by Claim 47, and this claim is also generic to these two species.

15
16 Respectfully submitted,

17
18
19 /sabrina k. macintyre/
20 Sabrina K. MacIntyre
Registration No. 56,912

21 SKM/RMA:bmd